

No. 865,575.

PATENTED SEPT. 10, 1907.

G. W. DREW.

FEED ROLL.

APPLICATION FILED APR. 10, 1906.

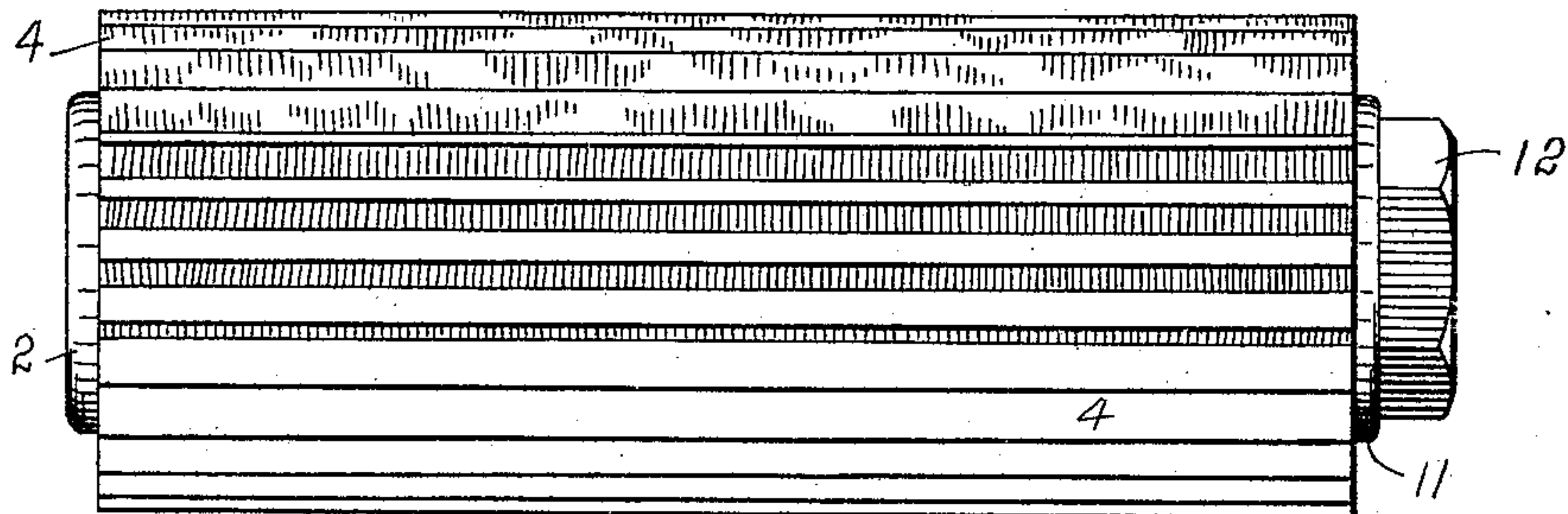


Fig. 1.

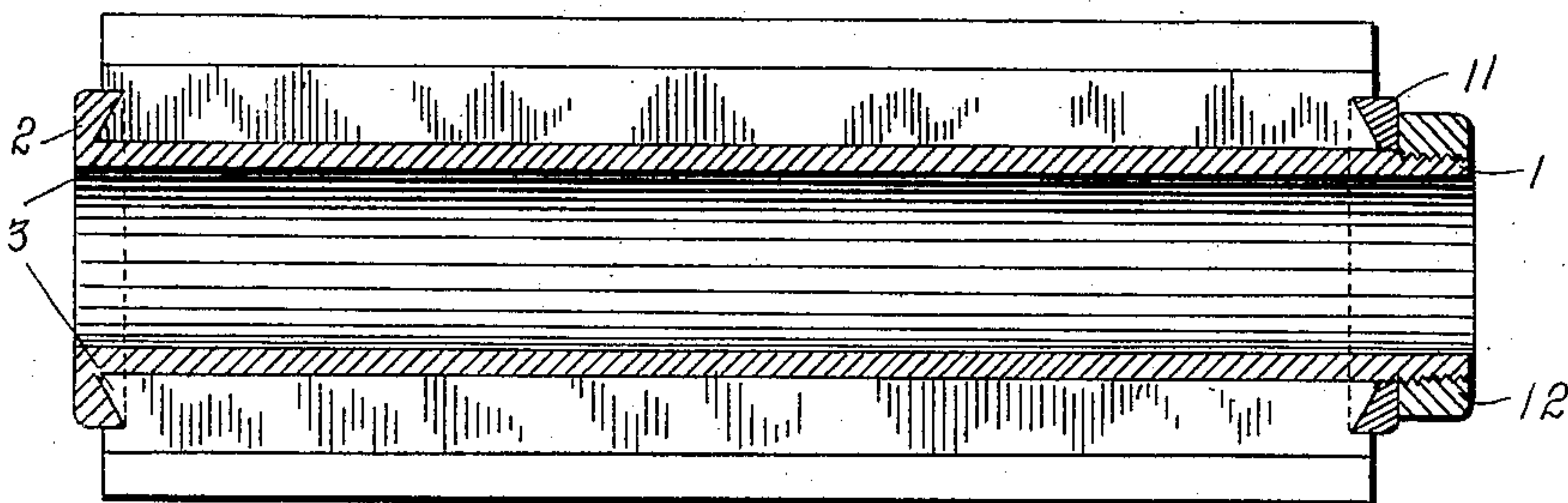


Fig. 2.

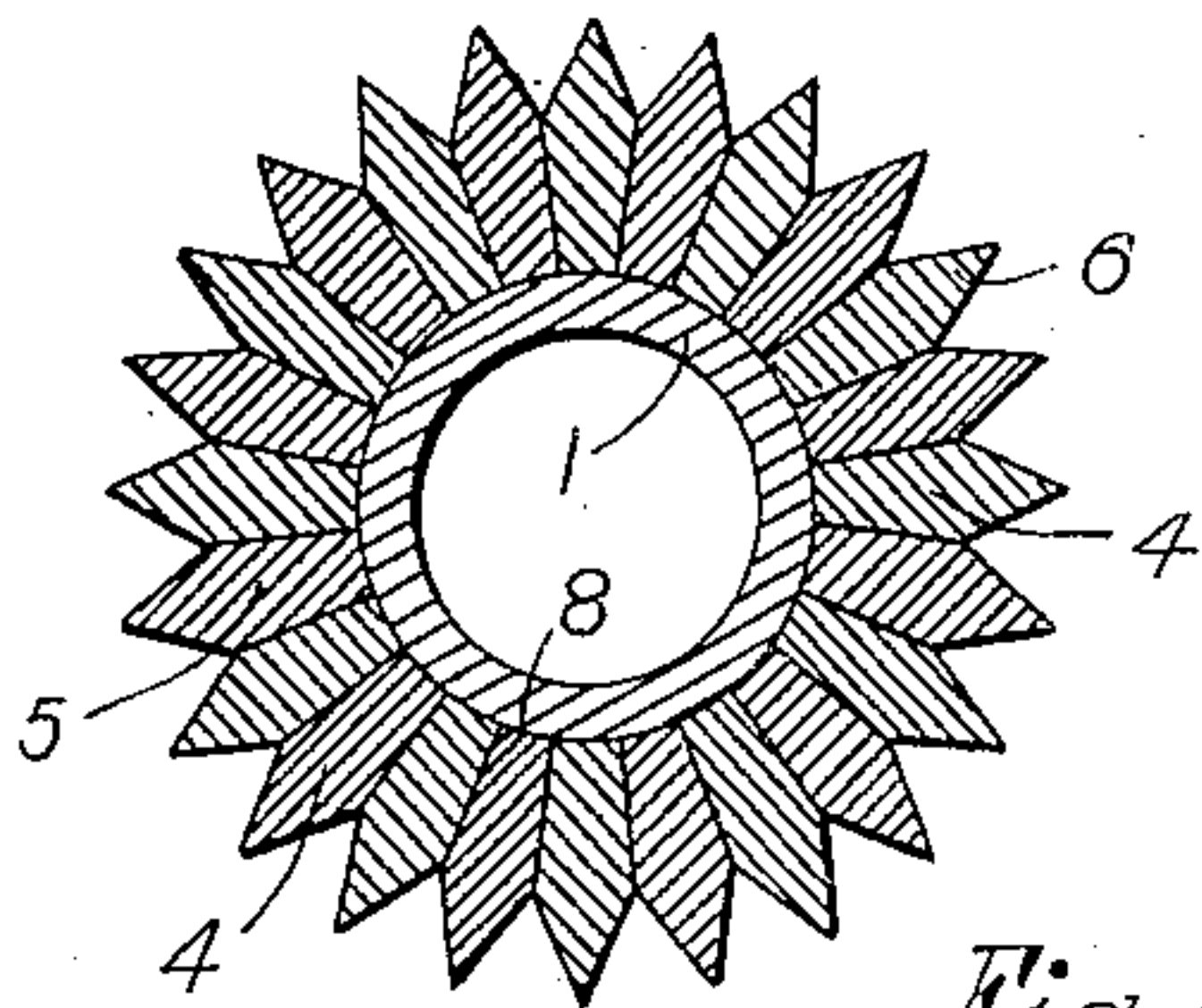


Fig. 3.

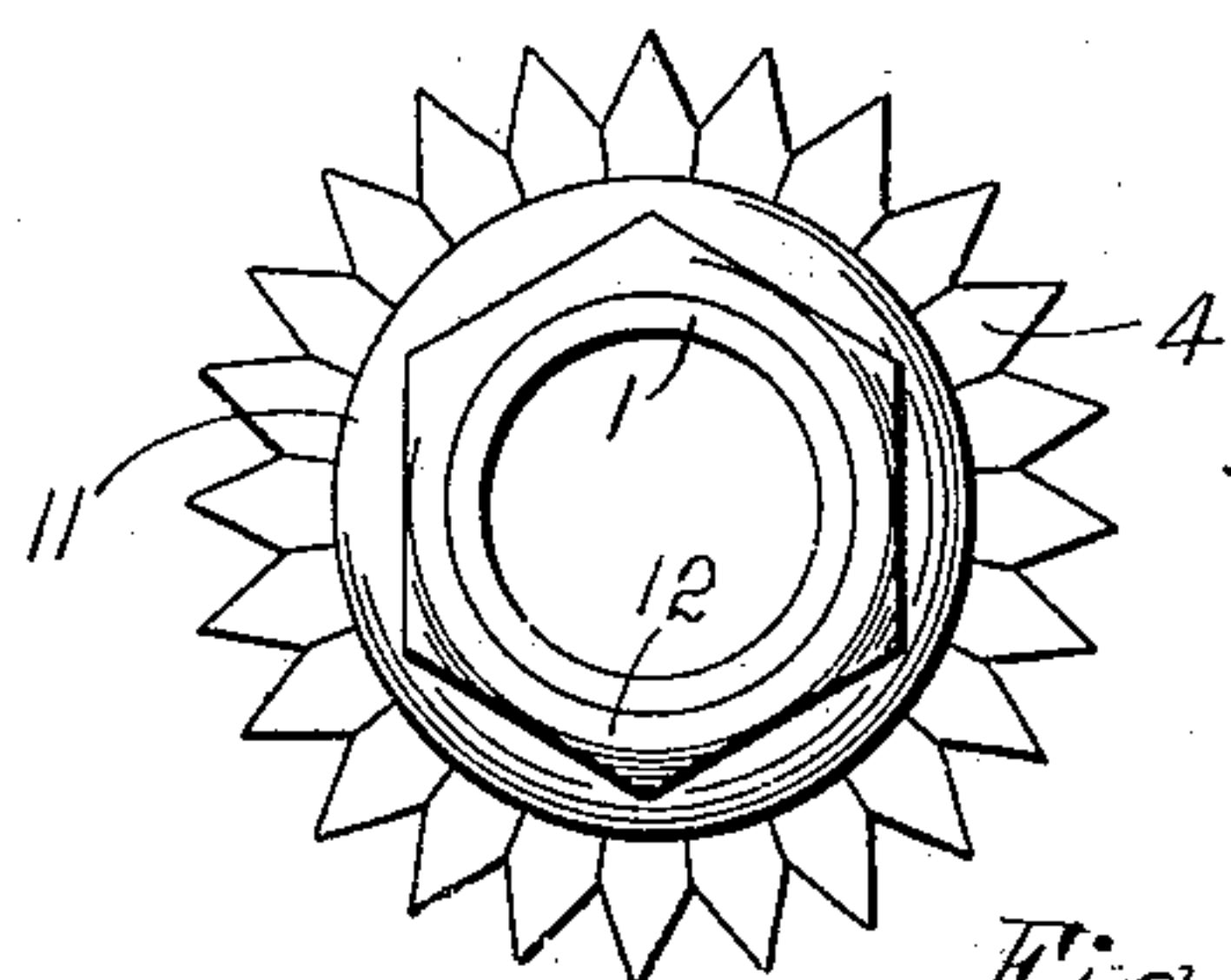


Fig. 4.

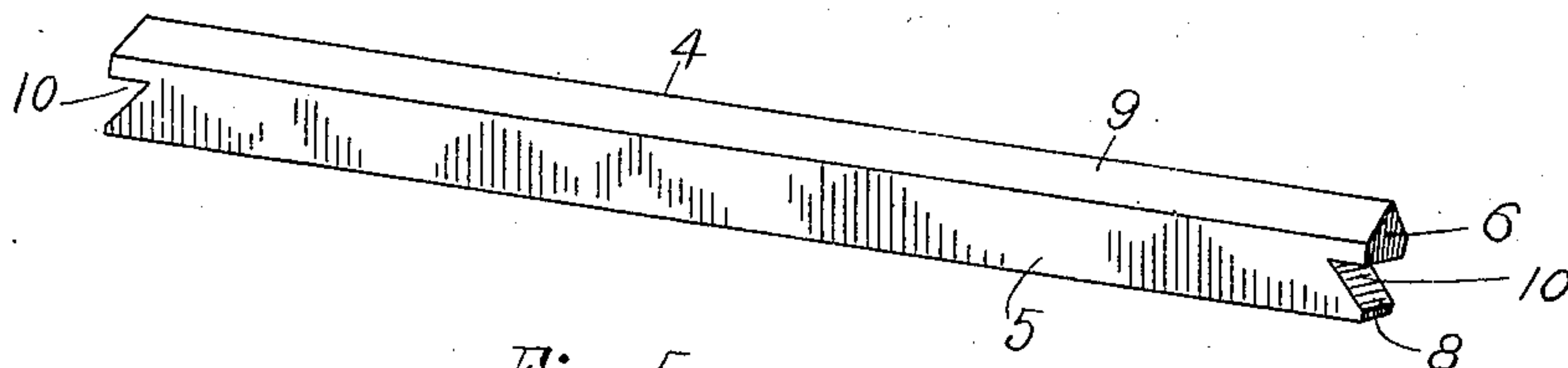


Fig. 5.

WITNESSES:

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GEORGE W. DREW, OF SAN FRANCISCO, CALIFORNIA.

FEED-ROLL.

No. 865,575.

Specification of Letters Patent.

Patented Sept. 10, 1907.

Application filed April 10, 1906. Serial No. 310,892.

To all whom it may concern:

Be it known that I, GEORGE W. DREW, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have
5 invented certain new and useful Improvements in Feed-Rolls, of which the following is a specification.

This invention relates to improvements in feed rollers, the object of the invention being to provide a feed roller which can be made at less cost and which
10 will be more durable than those heretofore used.

In the accompanying drawing Figure 1 is a side view of the feed roller; Fig. 2 is a longitudinal section thereof; Fig. 3 is a cross section thereof; Fig. 4 is an end view; Fig. 5 is a perspective view of one of the
15 blades detached.

Referring to the drawing 1 indicates a tube or support, having a head 2, with a reëntrant inner surface 3. Around said tube are assembled the blades 4 each having an inner or body portion 5 and an outer or tooth
20 portion 6. The inner body portion has sides in planes passing through the axis of the tube, so that said sides diverge, as shown in Fig. 3. The inner face or edge 8 of the body portion rests upon the tube. The sides 9 of the outer or tooth portion converge from the outer
25 edges of the diverging sides of the body portion to an edge sufficiently sharp for the purpose desired. The ends of the blades are formed with notches 10, to engage at one end the head 2 of the tube, and at the other end a collar 11 having a reëntrant inner surface
30 corresponding to the oblique inner side of the head of the tube, and the inner sides of the notches of the blades are formed oblique to rest against said inner surfaces. The collar 11 is secured upon the tube by means of a nut 12 upon the end of the tube. With

this construction the feed roll can be made at much
35 less cost than feed rolls heretofore used, as, for instance, those in which the blades are inserted into grooves in a drum, the work of forming these grooves being very expensive. The blades can be formed from a continuous strip of metal rolled into the proper form cross-sectional and cut into lengths. A further important advantage of this construction is that, by making the blades comparatively thick, there is sufficient stock in the teeth to permit them to be tempered hard, so that they will wear well. In feed rolls in which the blades
40 have been made thin, the teeth had to be set close to the body of the roll, or they would break if tempered sufficiently hard.

I claim:—

A feed roller consisting of a cylindrical support, and
45 blades having an inner or body portion, and an outer or tooth portion, the inner faces or edges of the body portions resting on the support, and the sides of adjacent body portions converging towards, and contracting with, each other, and the sides of each tooth portion converging
50 from the outer edge of the blade, the ends of the blades having notches with inner sides sloping towards the axis of the support in an outward longitudinal direction from the blades, the support having at one end an integral head with a reëntrant oblique inner surface engaging said
55 sloping inner sides of the notches at one end of the blades, and a collar at the other end having a similar reëntrant inner surface to engage those of the notches at the other end, and means for securing said collar in position, substantially as described. 60

In witness whereof I have hereunto set my hand in the presence of two subscribing witnesses.

G. W. DREW.

Witnesses:

BESSIE GORFINKEL,
HAZEL RIVERS.